In the Claims:

Listing of claims:

Claims 1-29 (canceled).

30. (Currently Amended) Process for manufacturing fine iron based powders comprising the steps of:

(a) providing an iron based, fragmented raw material, finely divided when applicable, the raw material is chosen from at least one of the material groups consisting of iron powder, sponge iron, iron oxide powder, steel powder and finely divided steel turning scrap;

(b) transforming raw material to nitride by means of ammonia gas to provide a brittle nitridic material;

(c) milling the nitridic material to particle sizes desired, when applicable; and

(d) denitriding the milled nitridic material to a fine iron based powder in a temperature range between about 250°C to 400°C.

31. (Canceled) .

32. (Previously Presented) Process according to claim 30, wherein the transformation to nitride is carried out in a temperature range between about 400° and 800°C.

33. (Previously Presented) Process according to claim 32, wherein the transformation to nitride is carried out in a temperature range between about 500° and 700°C.

34. (Previously Presented) Process according to claim 30, wherein the nitridic material has a nitrogen content of about 3% to 20% by weight.

35. (Previously Presented) Process according to claim 34, wherein the nitrogen content is more than 6% by weight.

36. (Previously Presented) Process according to claim 30, wherein the milling step is performed by milling equipment for milling materials down to micron sizes.

37. (Previously Presented) Process according to claim 36, wherein the milling equipment is chosen from the group consisting of ball milling equipment and jet milling equipment.

38. (Previously Presented) Process according to claim 30, wherein the milling step is performed batchwise.

39. (Previously Presented) Process according to claim 30, wherein the milling step is performed continuously.

40. (Previously Presented) Process according to claim 30, further including the step of separating a fraction of powder particles of the milled nitridic material within a desired particle size interval.

41. (Previously Presented) Process according to claim 40, wherein the separation step is chosen from the group consisting of sieving and elutriation techniques in a batchwise or continuous separation procedure.

42. (Previously Presented) Process according to claim 40, wherein the milling and separation steps are performed dry.

43. (Previously Presented) Process according to claim 40, wherein the milling and separation steps are performed wet.

44. (Previously Presented) Process according to claim 40, wherein, during the separation step, too coarse, separated particles of the milled nitridic material are recirculated from the separation step to the transformation step.

45. (Previously Presented) Process according to claim 40, wherein, during the separation step, nitride powder is produced as an alloying substance for sintering purposes.

46. (Previously Presented) Process according to claim 40, further comprising the step of using a portion of the powder particles of the milled nitridic material as an alloying substance in sintered steel production.

47. (Previously Presented) Process according to claim 30, wherein the transformation to nitride and milling steps are performed in an integrated process step by providing milling bodies in a rotating tube furnace.

48. (Previously Presented) Process according to claim 30, wherein denitriding step is performed by hydrogen gas.

49. (Currently amended) Process according to claim 48, wherein the denitriding step is performed in a temperature range between about ~~250° to 400°C~~300° to 350°C.

50. (Currently amended) Process according to claim [[47]]30, wherein the denitriding step is performed in a temperature range between about 300° to 350°C.

51. (Previously Presented) Process according to claim 30, wherein the fine iron based powder produced by the denitriding step has a mean particle size of about 1 to 50 µm.

52. (Previously Presented) Process according to claim 51, wherein the fine iron based powder produced by the denitriding step has a mean particle size of about 3 to 25 µm.

53. (Previously Presented) Process according to claim 30, further comprising the step of using the fine iron based powder as material for metal injection molding.

54. (Previously Presented) Process according to claim 30, further comprising the step of using the fine iron based powder in a sintering process.

55. (Previously Presented) Process according to claim 54, wherein the fine iron based powder is a steel powder.

56. (Previously Presented) Fine iron based powder produced by the process according to claim 30.

57. (Withdrawn) Plant for manufacturing fine iron based powders comprised of:

(a) means for containing a fragmented iron based raw material;

(b) transformation means for providing ammonia gas to said raw material to transform the raw material substantially totally to nitride to provide a brittle nitridic material;

(c) milling means, when applicable, for milling the nitridic material to particle sizes desired; and

(d) means for denitriding the milled nitridic material to a fine iron based powder.

58. (Withdrawn) Plant according to claim 57, wherein said transformation means operates in a range of about 400° to 800°C.

59. (Withdrawn) Plant according to claim 58, wherein said transformation means operates in a range of about 500° to 700°C.

60. (Withdrawn) Plant according to claim 57, wherein said transformation means provides a nitrogen content in a range of about 3% to 20% by weight.

61. (Withdrawn) Plant according to claim 60, wherein said transformation means provides a nitrogen content over 6% by weight.

62. (Withdrawn) Plant according to claim 57, wherein said milling means is chosen from the group consisting of ball milling equipment and jet milling equipment for milling materials down to micron sizes.

63. (Withdrawn) Plant according to claim 57, wherein the milling means is arranged for batchwise milling.

64. (Withdrawn) Plant according to claim 57, wherein the milling means is arranged for continuous milling.

65. (Withdrawn) Plant according to claim 57, further comprising separation means for obtaining a fraction of powder particles of the milled nitridic material within a desired particle size interval.

66. (Withdrawn) Plant according to claim 65, wherein the separation means is chosen from the group consisting of sieving and elutriation means arranged for batchwise or continuous operation.

67. (Withdrawn) Plant according to claim 65, wherein the milling and separation means are intended to be operated dry.

68. (Withdrawn) Plant according to claim 65, wherein the milling and separation means are intended to be operated wet.

69. (Withdrawn) Plant according to claim 65, wherein the separation means separates too coarse particles to be recirculated back to the transformation means.

70. (Withdrawn) Plant according to claim 57, wherein the transformation and milling means are a rotating tube furnace provided with milling bodies.

71. (Withdrawn) Plant according to claim 57, wherein the transformation and milling means are integrated.

72. (Withdrawn) Plant according to claim 71, wherein the integrated transformation and milling means are a rotating tube furnace provided with milling bodies.

73. (Withdrawn) Plant according to claim 71, further comprising separation means for obtaining a fraction of powder particles of the milled nitridic material within a desired particle size interval.

74. (Withdrawn) Plant according to claim 73, wherein the separation means separates too coarse particles to be recirculated back to the transformation means.

75. (Withdrawn) Plant according to claim 57, wherein the denitriding means provides hydrogen gas for denitriding the nitride powder.

76. (Canceled).

77. (Canceled).

78. (Canceled).

79. (New) Process according to claim 30, wherein the finely divided steel turning scrap has particle sizes of about 50 to 500 µm.

80. (New) Process according to claim 30, wherein the finely divided raw material has particle sizes of about 50 to 500 µm.

81. (New) Process according to claim 50, wherein the finely divided steel turning scrap has particle sizes of about 50 to 500 µm.

82. (New) Process according to claim 50, wherein the finely divided raw material has particle sizes of about 50 to 500 µm.